

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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|--------------------------------|---|-----------------------------------|
| In re Application of:          | § |                                   |
| Shashishekara Talya et al.     | § | Group Art Unit: 3745              |
|                                | § |                                   |
| Serial No.: 10/813,720         | § | Examiner: Verdier, Christopher M. |
|                                | § |                                   |
| Filed: March 31, 2004          | § | Confirmation No.: 7407            |
|                                | § |                                   |
| For: PELTON TURBINE SYSTEM AND | § | Atty. Docket: 136466-1/YOD        |
| METHOD                         | § | GERD:0092                         |

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November 13, 2007

/Patrick S. Yoder/

Date

Patrick S. Yoder

**REPLY BRIEF PURSUANT TO 37 C.F.R. §§ 41.41**

This Reply Brief is being filed in response to the Examiner's Answer mailed on September 13, 2007. This Reply Brief addresses the Examiner's misunderstanding of the technology, as well as the Examiner's continuing pattern of misapplying the teachings of the prior art beyond its reasonable limits in order to reach the subject matter taught and claimed by Appellants. In the interest of brevity in this Reply Brief, Appellants respectfully ask that the Board carefully consider the arguments set forth in the previously-filed Appeal Brief.

**The Examiner's position erroneously equates two distinct types of nozzle.**

Independent claims 19, 21 and 23 recite at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies.

In the Final Office Action mailed on November 2, 2006, the Examiner cited element 33 of FIG. 2 of Moody and stated that Moody discloses a method of operating a Pelton turbine wherein the Pelton turbine comprises at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies.

In the Advisory Action mailed on January 31, 2007, the Examiner repeated that the rejected claims do not recite any structural difference between the needle valve injector assemblies and the high efficiency injector assemblies. The Examiner also stated that elements 33 of Moody may be considered as both needle valve injector assemblies as well as high efficiency injector assemblies.

In the Examiner's Answer mailed on September 13, 2007, the Examiner stated that the rejected claims do not recite any structural difference between the needle valve injector assemblies and the high efficiency injector assemblies. The Examiner also stated that in Moody two needle valves 63 are each respectively located in a respective needle valve injector assembly 33, and two other valves 63 are provided which may be considered to each be located in a respective high efficiency injector assemblies. The Examiner further stated that the term "high efficiency injector assembly" is a relative term, and the two other valves 63, each may be considered to be located in "high efficiency injector assembly" 33, since the needle valve in the injector assembly would be a high efficiency injector assembly compared to an injection that occurs drop-by-drop, for example, which would be a low-efficiency injector assembly.

Appellants wish to point out that Moody discloses the same nozzles 33 disposed along the spiral casing or conduit. That is, Moody provides a single type of assembly (nozzles 33) while the foregoing claims require two different injector assemblies. There is simply no basis whatsoever in Moody for supposing that the nozzles are different.

The Examiner cited a portion of the MPEP on Page 5 lines 10 – Page 6 line 5 of the Examiner's Answer, omitting a later portion of the paragraph cited. In fact, more completely the section reads:

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." >The Federal Circuit's en banc decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard.

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1). 415 F.3d at 1316, 75 USPQ2d at 1329.

Appellants refer to these paragraphs of MPEP cited by the Examiner and respectfully point out that the issue at hand is not merely finding the "broadest reasonable interpretation", as stated by the Examiner, but the "broadest *reasonable* interpretation *consistent with the specification*" (emphasis added). It is in this connection that Appellants rely on the features disclosed in the claims and discussed in the specification. The application refers first to the needle valve injector assembly, and separately to the high efficiency injector assembly. The term high efficiency injector assembly represents an element structurally different from the needle valve injector assembly. The point of distinction made in the current application being the *two types* of the injector assemblies. The only reasonable interpretation is that these terms refer to *two structurally different* types of injector assemblies. To find otherwise would be to entirely vitate the meaning of "alternately" disposing the nozzles. Appellants respectfully stress that if Moody only discloses identical of valves, it simply cannot anticipate the claims under appeal.

**The claimed nozzles are not the same (as described by Moody).**

Further, the specification of the current application clearly makes a distinction between these two types of nozzles. As disclosed in paragraph 25 of the application, the needle valve injector assemblies 28 and the high efficiency injector assemblies 36 are disposed alternately around the distributor 26. The exact number and the arrangement of the needle valve injector assemblies 28 and the high efficiency injector assemblies 36 will depend upon such factors as the power requirements of the generator, the capacity of the Pelton turbine, and the particular system design. The flow of water through the needle valve injector assemblies 28 is controlled through the operation of the needle valves 30 in the needle valve injector assemblies 28, which are typically coupled to hydraulic servomotors under the control of control modules 46. Similarly, each of the high efficiency injector assemblies 36 is also connected to an actuator, typically a rotary valve actuator responsive to control signals from a respective control module 44. The control modules of the needle valve injector assemblies 28 and the high efficiency injector assemblies 36 are connected to the central control unit 48, which controls the overall flow of water through the turbine, as well as the relative opening or closing of the various injectors.

In summary, independent claims 19, 21, and 23 recite different types of injector assemblies, i.e. “needle valve injector assemblies” and “high efficiency injector assemblies”. As regards the meaning of these terms, there are *two possibilities*. Either the terms mean the *same thing* or the terms mean *different things*. Because different terms are used in the claims and these terms clearly mean different things in view of the specification, it is not reasonable to ascribe the same meaning to these different terms. Therefore, the terms used in the claims on appeal do not mean the same injector assembly, but mean that the assemblies are different.

Because Moody does not teach or suggest Pelton turbines comprising at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies (or two different types of nozzle at all), Moody cannot anticipate

independent claims 19, 21, 23, and the claims depending therefrom. For these reasons, Appellants respectfully request reversal of the rejections under 35 U.S.C. § 102.

Respectfully submitted,

Date: November 13, 2007

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